

IN THE CLAIMS:

Claims 2, 10, and 24-41 were previously cancelled. None of the claims have been amended herein. All of the pending claims are presented below for convenience of the Examiner. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as previously amended.

1. (Previously presented) A parallel plate plasma reactor, comprising:
first, second and third power generators wherein the first power generator is capacitively coupled to an upper electrode and the second and third power generators are capacitively coupled to a lower electrode for supporting a wafer thereon, the first, second and third power generators being frequency-based power generators; and
a controller configured to individually selectively activate the first, second and third power generators to a plurality of activation configurations during a plurality of phases of a duty cycle of a process, wherein at least one of the plurality of activation configurations includes differently activating the second and third power generators to generate at least two different active states on the lower electrode;
wherein each of the second and third power generators are configured to independently receive a signal from the controller and independently apply energy directly to the lower electrode entirely to generate the at least two different active states thereon.
2. (Cancelled)
3. (Previously presented) The plasma reactor of claim 1, wherein the second power generator is configured to operate at a frequency of at least three times an operational frequency of the third power generator.

4. (Previously presented) The plasma reactor of claim 1, wherein the first power generator is configured to operate at a frequency of at least greater than or equal to each of an operational frequency of the second power generator and an operational frequency of the third power generator.

5. (Previously presented) The plasma reactor of claim 1, wherein the controller is operable to place the first power generator in an inactive mode and the second and third power generators in an active mode.

6. (Previously presented) The plasma reactor of claim 1, wherein the controller is operable to place the first and third power generators in an active mode and the second power generator in an inactive mode.

7. (Previously presented) The plasma reactor of claim 1, wherein the controller is operable to place the first and second power generators in an active mode and the third power generator in an inactive mode.

8. (Previously presented) The plasma reactor of claim 1, wherein the controller is operable to place the first, second and third power generators in an active mode.

9. (Previously presented) The plasma reactor of claim 1, wherein the controller during a process is operable to configure the first, second and third power generators to a first activation configuration during a first phase thereof and to reconfigure the first, second and third power generators to a second activation configuration during a second phase thereof.

10. (Cancelled)

11. (Previously presented) The plasma reactor of claim 1, wherein the controller is further operable to control power levels of the first, second and third power generators during the plurality of activation configurations.

12. (Previously presented) The plasma reactor of claim 1, wherein each of the first, second and third power generators is capacitively coupled to one of the upper and lower electrodes.

13. (Previously presented) The plasma reactor of claim 1, wherein the second power generator operates at a frequency of about 13.5 MHz to about 60 MHz.

14. (Previously presented) The plasma reactor of claim 1, wherein the first power generator operates at a frequency of about 40 MHz to about 100 MHz.

15. (Previously presented) The plasma reactor of claim 1, wherein the third power generator operates at a frequency of about 1 MHz to about 13.5 MHz.

16. (Previously presented) A parallel plate plasma reactor, comprising:
a vacuum chamber including upper and lower electrodes therein;
first, second and third power generators wherein the first power generator is capacitively coupled to an upper electrode and the second and third power generators are capacitively coupled to a lower electrode for supporting a wafer thereon, the first, second and third power generators being frequency-based power generators; and
a controller configured to individually selectively activate the first, second and third power generators to a plurality of activation configurations during a plurality of phases of a duty cycle of a process, wherein at least one of the plurality of activation configurations includes differently activating the second and third power generators to generate at least two different active states on the lower electrode;

wherein each of the second and third power generators are configured to independently receive a signal from the controller and independently apply energy directly to the lower electrode entirely to generate the at least two different active states thereon.

17. (Previously presented) The plasma reactor of claim 16, further comprising a wafer table, wherein the lower electrode is coupled to the wafer table and the upper electrode is arranged above the wafer table.

18. (Previously presented) The plasma reactor of claim 16, wherein each of the first, second and third power generators is capacitively coupled to one of the upper and lower electrodes.

19. (Previously presented) The plasma reactor of claim 16, wherein the first power generator is capacitively coupled to the upper electrode and the second and third power generators are capacitively coupled to the lower electrode.

20. (Previously presented) The plasma reactor of claim 19, wherein the second power generator is configured to operate at a frequency of at least three times a frequency of the third power generator.

21. (Previously presented) The plasma reactor of claim 20, wherein the second power generator is configured to operate at a frequency of about 13.5 MHz to about 60 MHz.

22. (Previously presented) The plasma reactor of claim 20, wherein the first power generator is configured to operate at a frequency of about 40 MHz to about 100 MHz.

23. (Previously presented) The plasma reactor of claim 20, wherein the third power generator is configured to operate at a frequency of about 1 MHz to about 13.5 MHz.

24.-41. (Cancelled)